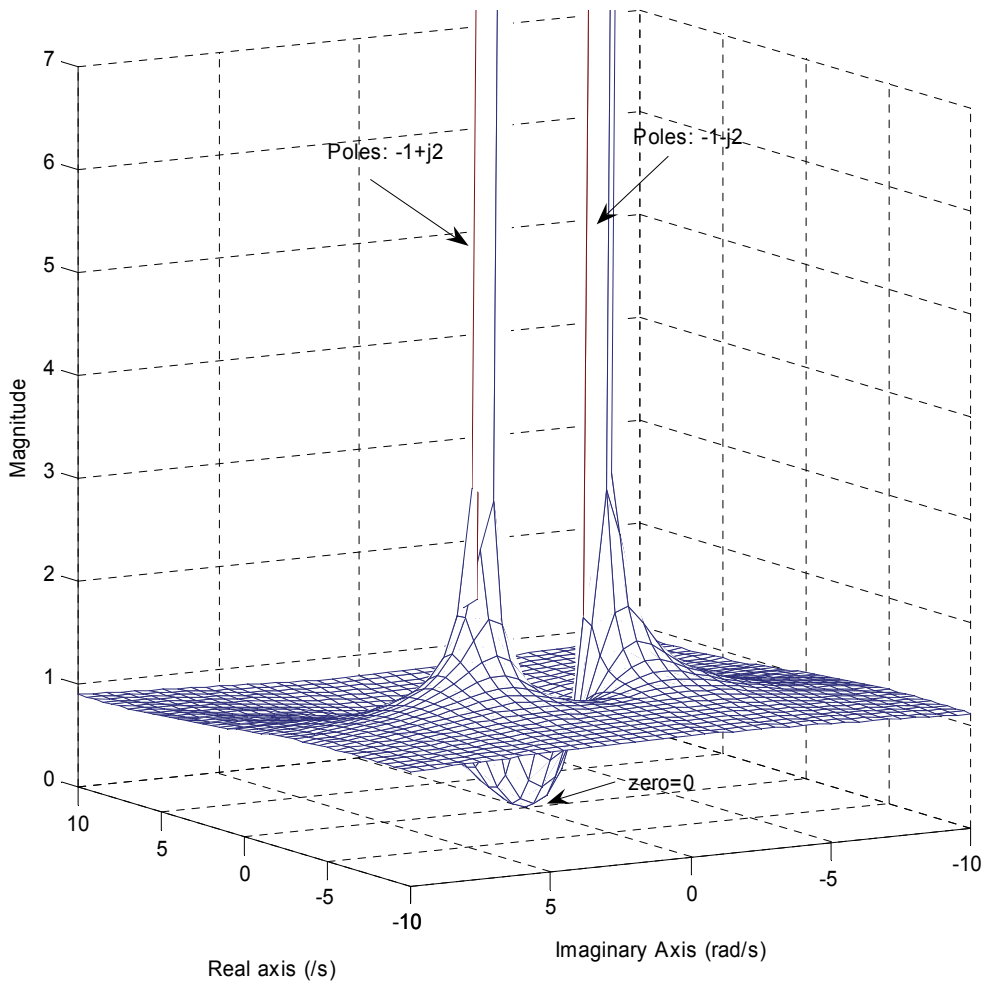


### 3D Plot of a Transfer Function

$$F2(s) = \frac{s^2}{s^2 + 2s + 5} = \frac{s^2}{(s+1-j2)(s+1+j2)}$$

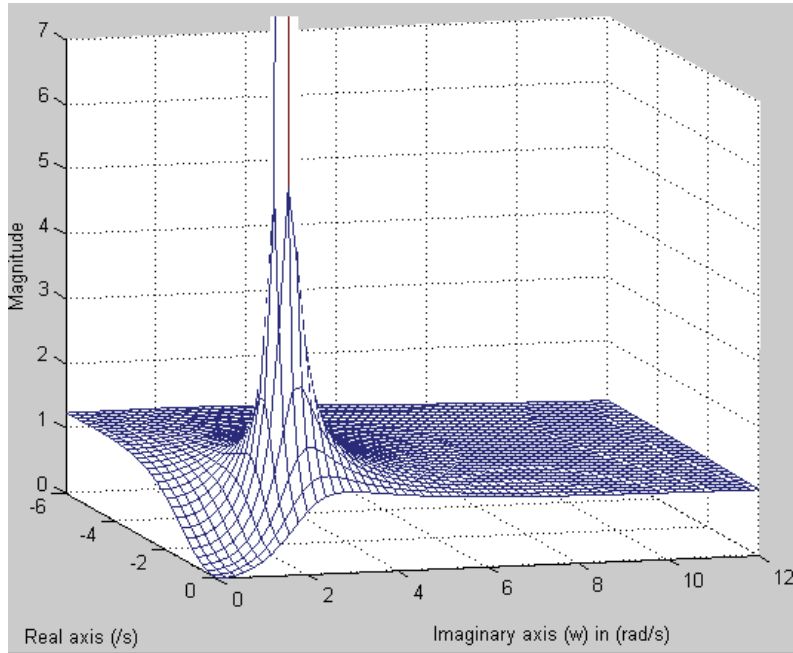
To Plot the magnitude of F2(s)  
with  $s=X+jY$ ;

```
>> [X,Y]=meshgrid(-10:0.5:10);  
>> F2=(X.^2+Y.^2)./(sqrt((X.^2-Y.^2+2*X+5).^2+(2*X.*Y+2*Y).^2)+eps);  
>> mesh(X,Y,F2)
```



### Cross section at Real axis $\sigma=0$ rad/s:

```
>> [X,Y]=meshgrid(-6:0.5:0,-8:0.5:8);  
>> F2=(X.^2+Y.^2)./(sqrt((X.^2-Y.^2+2*X+5).^2+(2*X.*Y+2*Y).^2)+eps);  
>> mesh(X,Y,F2)
```



### Bode Plot: dB scale for magnitude and $\log\omega$ scale for radial frequency $\omega$ at $\sigma=0$ /s:

